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INDIRECT COSTS REIMBURSEMENT IN THE U.S.A.: FACTS AND FICTION

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Introduction

Over the past few years, the issue of indirect costs has been largely debated in the United States. This level of public debate has contributed greatly to clarifying the difficult, and sometimes less than intuitive, concepts upon which the support for indirect costs rest. In Canada, our system of research support derives, at least in part, from historical decisions on federal-provincial roles and responsibilities and the mechanism for the funding of indirect costs is less than clear. When this issue is raised, comparisons with the proven U.S. system are inevitable. The following clarifies the tenets of the U.S. system for indirect cost reimbursements and deals with some common misconceptions.

Partnership

The U.S. system of research support is based on a loose concept of partnership between universities and the federal government. This partnership has yielded benefits that are vital to each and continues "to prove exceptionally productive, successfully promoting the discovery of knowledge, stimulating technological innovation, improving the quality of life, educating and training the next generation of scientists and engineers, and contributing to America's economic prosperity"[1].

Yet, the federal role in support of indirect costs has never been totally clear. From the federal government's perspective, the payment of the indirect costs is part of its support for research and is not meant to cover the full costs as the

Highlights

- Although the federal government reimburses real costs incurred by institutions in conducting federally sponsored research, universities carry substantial financial responsibilities.
- The rate of reimbursement is negotiated by each institution with one of two government agencies and is applied to all federal grants received by the institution. As a result, each institution has a different rate.
- Rates are applied to modified total direct costs, which exclude some of the admissible direct costs such as equipment and sub-contracts.
- The average rate of indirect cost reimbursement was 52,3% in 1997. Rates have been very consistent during the 1990s despite numerous policy changes.
- The administrative portion of reimbursements was capped at 26% in 1991 but there is a growing realization that this limit needs to be revisited.

government does in its procurement activities. Hence the idea of a partnership. It is largely understood and accepted that the federal government should pay its "fair share" of university research costs. However, the concept of "fair share" has never been defined. In academia, where "fair share" is equated with "full costs", there is a sense that the federal government never quite lived up to its "commitment". This promise was purportedly made in the 1960's. But there is no evidence that it was actually made. The recent review of the concept of federal government-university partnership did not resolve this problem either.

What is clear however is that reimbursements of indirect costs of sponsored research is a long-standing policy in the U.S., dating back to the 1940's. For this reason, direct and indirect costs cannot be dissociated. Both are real and must be covered. Federal research grants reflect this fact. From this perspective, the U.S. federal policy on reimbursement of indirect costs is central to the idea of partnership simply because those payments are a very significant part of the way research is supported in that country. Indirect cost payments for federally sponsored research at universities represent close to $US 4 billion a year. It is also important to note that the policy has evolved over time. The periodic adjustments to the level of support provided is a clear recognition of the importance of adequately covering the real and substantial costs associated with federally sponsored research. Despite the very significant investments, the federal government does not support the full costs of research. In this research partnership, universities still carry substantial financial responsibilities.

1940's	no support
1947	8%
1958	15%
1963	capped at 20%
1966	cap removed, negotiated rates apply
1991	cap of 26% on the administrative portion of reimbursements
1997	average rate 52,3%, range from 15% to 115%

The costs of research

The costs of research can be divided in at least three categories: the research activities proper, the research facilities used, and the administrative costs incurred. There are various ways to define each category of costs but, generally speaking, research activities refer to payment for salaries, equipment & laboratory materials, and other incremental costs of conducting a specific research project (e.g., travel, supplies). Because they can generally be directly attributed to specific research activities being carried out, they are generally referred to as "direct costs".

Granting agencies and government departments (such as Defence and Energy) establish the rules that determine the categories of direct costs that are eligible for support. Allowable costs generally include all salaries and wages[2] plus fringe benefits, compensation of students (in the form of wages or tuition remission but not scholarships), equipment, materials and supplies, research patient care, travel, and consultant services. Other direct costs, such as capital expenditures for improvements to buildings, land or equipment and for general purpose equipment such as office furnishings, are usually not allowed unless approved in advance. In Canada, direct costs are generally less inclusive and do not normally include principal investigators' salaries (see box). This explains the large difference in the size of grants between the U.S. and Canada[3].

The other two categories, "facilities and administrative costs", have historically been called "indirect costs" because they refer to costs that cannot be attributed directly to a specific project but are required for the conduct of research. These include administration of research budgets, use of other administrative and professional services, equipment depreciation and maintenance costs, buildings and land, libraries and computer services, etc. Sponsored research, supported by either grants or contracts, result in such costs.

Salaries: direct or indirect costs?

In the U.S., salaries of principal investigators (or partial salaries) are considered to be direct costs of research and are eligible for funding by the granting agencies. Grants from both the National Institutes of Health and the National Science Foundation contain a salary component. However, because it has considerably more resources, the NIH tends to spend much more on salaries than the NSF. In fact, even though direct costs include p.i. salaries at the N.S.F., the latter has historically always discouraged its payments during the academic year and has in practice only paid for "Summer salaries". However, there is no consistent rule on this even inside the NSF.

In Canada, p.i. salaries are not considered an admissible direct cost and only the salary costs of research associates (i.e., students, post-doctoral fellows, research assistants) are eligible expenses for the granting councils. Because of the difficulty in attributing directly to each research project the amount of time devoted by each faculty member to specific research projects, p.i. salaries have therefore largely been considered *de facto* indirect costs in our system.

Negotiated rates

In the U.S., the federal government provides reimbursement for these indirect costs of research as part of grant funding. The amount of indirect costs to be repaid to institutions for the costs they incur in providing the facilities and services for this research is calculated by applying a rate that has been negotiated with the federal government. The only exception to this rule is a special rate of 14% used by the Department of Agriculture with land-grant universities. The determination of this rate is a lengthy process and the costs are documented in a very detailed way by the universities and reviewed by government auditors. Two agencies are responsible for reviewing university-submitted costing estimates: the Office of Naval Research (for roughly 35 institutions) and the Department of Health and Human Services (for everyone else). The agency responsible for overseeing this process is the Office of Management and Budget. Instructions to federal agencies for the payment of indirect costs are contained in a lengthy document (OMB Circular A-21) spelling the principles and mechanics involved[4]. Since 1991, indirect costs are called "Facilities and administrative costs" (F&A).

Federal negotiators and university administrators agree on an overall percentage of allowed F&A costs to be reimbursed to the university. This is referred to as the F&A cost rate, which varies widely between institutions. The F&A rate is an institutional rate and, once agreed upon, applies to every grant awarded to the institution, regardless of disciplines. It applies for a specific duration (typically from 3 to 5 years) and to every federal research grant, from any federal source (i.e., granting agencies and federal departments). Some institutions, however, negotiate different rates for various units on campus. For example, the F&A rate for Harvard University was 65% in 1997 but was 80% for the Harvard Medical School.

In general, rates vary from less than 40% to over 70%. There are three main reasons for the variation. First, research is more expensive in some fields than in others. Second, there are marked regional differences in real costs (e.g., energy costs). Third, and perhaps more important, there are different incentives to private and public institutions to negotiate their rates - public universities have an income stream from state governments which can in some cases be used to cover some of the indirect costs; private universities do not. As a result, rates for public institutions are lower (in 1997, 22 of the 25 highest rates were at private institutions).

Complex process of negotiations

The process of determining the rate for each institution requires a detailed study of expenditures in each university to calculate all direct costs and all indirect costs of running the university. This operation is not only costly (a lot of effort is expended on both sides and frequent reviews are required as research and accounting systems evolve), it is also complex and cumbersome and can sometimes deteriorate into public disputes, all in the name of accountability.

Calculating the F&A rate

Not every dollar of direct costs is included in determining the institutional F&A rate; some costs are not allowable. Costs that are generally not allowable as direct costs, such as capital expenditures for improvements

to buildings and for general purpose equipment, cannot be included as indirect costs either. F&A rates are calculated on the basis of modified total direct costs which exclude some admissible costs such as equipment, capital expenditures, charges for patient care, tuition remission, space rental costs, scholarships and fellowships as well as subcontracts and subgrants over US$25,000.

There are several exceptions to the basic policy on indirect cost reimbursement. For example, granting agencies generally provide no amounts for indirect costs for grants solely for the support of travel, equipment, and the construction of facilities, on fellowships, on grants to foreign and international institutions, and on grants in support of scientific meetings.

How much?

The facilities and administrative cost components of grant funding are often misunderstood. Many assume that a negotiated rate of 50% means that 50 cents of every grant dollar goes to administrative and facilities costs. That is not correct. On a $100,000 grant with a 50% rate, for example, $66,667 goes for research activities and $33,333 (50% of $66,667) goes for facilities and administration. In other words, 33% of the total grant, not 50%. On average, approximately 70% of a federal research grant to a university consists of so-called direct costs, the other 30% of grant awards is for indirect costs. It has been estimated that the largest components of indirect costs are administration and the depreciation, operation and maintenance of buildings and equipment. Once payments have been made to universities, the system works under the general expectation that the indirect cost reimbursements will be used to support and improve the research environment. Since the costs are real, there is little concern over exactly how the funds are spent (within the limits set by OMB c. A-21).

Indirect costs payments represent substantial sums of money. More than US$3 billion were paid in indirect costs to universities on grants awarded in 1999 by the National Institutes of Health and the National Science Foundation. In other words, out of total budgets for university research in excess of US$10 billion last year, a little less than 30% was spent on indirect costs. This corresponded to an overall F&A rate of approximately 45%, similar to previous years. In fact, although there have always been concerns over rising indirect costs, the rates have remained remarkably stable over the last decade[5].

Public perception problems

The mention of indirect costs does not generally generate "warm and fuzzy feelings". There is still a perception, both at the political level and in academic circles, that indirect costs payments are somehow "extra money". Researchers, in particular, often misconstrue indirect costs as a tax levied on their research grants by the university administration. This resistance is based on a lack of appreciation of the fact that these costs are real. In fact, the need to better educate stakeholders has been identified as a key concern by the Clinton administration and the granting agencies and concrete action is expected on that front. This perception problem is also the reason for replacing the technically correct terms of "overhead" and "indirect costs" by the more descriptive phrase of "facilities and administrative costs".

Although indirect costs account for less than half of the total cost of federal research grants, they have been the source of a great deal of public controversy[6]. The most visible ones have revolved around the inclusion of inappropriate expenses in the costing estimates. In general, many consider the rates to be too high, in part because the cost-based accounting system encourages universities to add unnecessary expenses to their overhead accounts. Universities reply that it is not too high when compared to federal R&D contracts. The anecdotal improprieties have created a perception of inefficiency and pressures to undertake reforms. The measures adopted include artificially capping administrative costs to 26% of modified total direct costs, tighter rules on "unallowable" costs (such as lobbying expenses) and more extensive audits (a perverse effect since those activities are themselves indirect costs). In fact, universities are the only organisations that do business with the government that are subject to an arbitrary limit on a major part of their indirect costs.

Now this cap is raising concerns that institutions are increasingly unable to comply with regulatory guidelines

(e.g., animal care, research involving human subjects) imposed by the federal government and its agencies[7]. The associated oversight and compliance costs borne by institutions are high. For example, Duke University recently indicated that they needed US$1-2 million to comply with various federal regulations. The problem is that universities are under the very real threat of losing support if they do not comply. The strain is visible in many institutions and compliance requirements are fuelling the need to revisit the 26% cap imposed in 1991. Addressing this issue from this perspective will highlight to everyone, including researchers, the very real costs of supporting research services.

Impact

For everyone in the U.S., the impact of indirect cost reimbursements has been central to the research competitiveness of its universities. However, the evidence is largely circumstantial since the evolution of this research capacity is largely concomitant with the evolution of the funding system which has always included some sort of indirect cost payments. If the strength of its university research system and the federal commitment to university research was not enough, the example of the State of Minnesota provides a concrete example of the spectacular impact of a system of indirect cost reimbursements on research. Until some years ago, the government of that state took away most of the money received by universities in indirect costs. The university sector demonstrated successfully that it could significantly improve the research environment with those entitlements and that the whole state would benefit from it.

Conclusion

Despite the many pressures driving up the costs of conducting state-of-the-art research in universities, F&A rates have remained remarkably stable in the U.S. over the past decade. This shows that universities have taken seriously the unfortunate public controversy that has shrouded the issue of indirect cost reimbursements in the U.S. for years by taking measures to increase the control of costs in general and by adopting better accounting practices. Concerns over ever-rising costs run rampant in the myriad of critiques directed at higher education in recent years. By demonstrating their willingness and ability at controlling those costs, U.S. universities demonstrate how seriously committed they are to the partnership on research with the U.S. federal government. The fact that they incur real and significant costs in conducting federally sponsored research is a clear testimony of the broad-based effort to improve the quality of that research effort, to the benefit of the whole U.S. society.

Endnotes

[1] Executive Office of the President, Office of Science and Technology Policy, *Renewing the Federal Government-University Research Partnership for the 21st Century*, National Science and Technology Council, Presidential Review Directive - 4, April 1999.

[2] Special rules apply for work performed on government sponsored research by faculty members during and outside the academic year. In general, salaries during the academic year are based on the individual faculty member's regular compensation and reflect no more than the percentage of time actually devoted to the funded project. During the summer months, salary is set at a monthly rate not in excess of the base salary divided by the number of months in the period for which the base salary is paid. At the National Science Foundation, these criteria are the basis of its "two-ninths rule", or NSF's policy on the funding of summer salaries, whereby funding for an individual investigator will not exceed two-ninths of the academic year salary. Salaries are also allowable direct costs for the National Institutes of Health but are not restricted to the summer months. However, as required in its annual appropriations act, NIH will not reimburse grantees for the direct salaries of individuals at a rate in excess of the level specified in the appropriations language.

[3] Robitaille, J.-P. and Y. Gingras, The level of funding for university research in Canada and the United States: comparative study, *AUCC Research File*, Volume 3, No. 1 (May 1999)

[4] OMB Circular No. A-21, *Principles for Determining Costs Applicable to Grants, Contracts, and Other Agreements With Educational Institutions*, Washington, D.C.: Office of Management and Budget, Executive Office of the President. <http://www.whitehouse.gov/omb/circulars/a021/a021.html>

[5] Cordes, Colleen, Overhead Rates for Federal Research are as High as Ever, Survey Finds. *The Chronicle of Higher Education*, January 23, 1998.

[6] There have been many reports, articles, and books on this topic. The following provide good overviews on the sources of

the debate and solutions that have been advocated: *University Research: Effect of Indirect Cost Revisions and Options for Future Changes*, GAO Report to Congressional Committees, GAO/RCED-95-74, Washington, D.C.: General Accounting Office, March 1995; Knezo, Genevieve J., *Indirect Costs at Academic Institutions: Background and Controversy*, Congressional Research Service Issue Brief, Washington, D.C.: The Library of Congress, August 1997; Noll, Roger G. and William P. Rogerson, The Economics of University Indirect Cost Reimbursement in Federal Research Grants, In Linda R. Cohen, Wesley Cohen, Roger G. Noll, William Rogerson, and Albert Teich, eds., *Challenges to Research Universities*, Washington, D.C.: The Brookings Institution, 1997; May, Robert M. and Stuart C. Sarson, Revealing the hidden costs of research, *Nature*, vol. 398, pp. 457-459.

[7] NIH Looks to Help out Universities on Human Subject Protection Costs, *Science & Government Report*, Vol. 30, No. 8, p. 6 (May 1, 2000).